

# Idaho Currents

## Clean-Burning E85 Fuel Returns to Idaho

It's not every day you see Idaho's governor filling the gas tank of his vehicle with a fuel made from corn or potatoes. But on Nov. 5, he was the first person in Idaho for several years to fill up with the clean-burning fuel, E85.

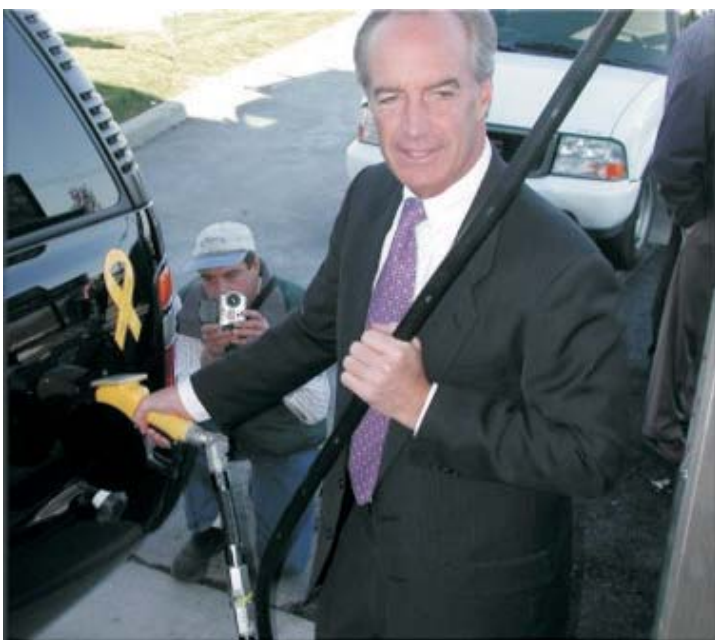
The Stinker Station on West Main Street in Boise is the first site in Idaho in several years to provide this blend of 85 percent ethanol and 15 percent gasoline. The first E85 pump in Idaho was located at the Stinker Station on Curtis Road, near Franklin Street, in Boise. It was installed in the late 1990s, but was removed a few years later. Until 2004, there were no E85 pumps in Idaho.

With the opening of the E85 pump in Boise, Idaho joins dozens of other states around the country in making the fuel available for flexible fuel vehicles (FFVs).

Ethanol is a high-octane, domestically produced renewable fuel. It is most often made from corn, but it can be produced using other agricultural products, such as potatoes or wheat. E85 produces less toxic emissions, carbon monoxide and greenhouse gases.

E85 can be used in any flexible fuel vehicle. FFVs are designed to run on an ethanol/gasoline blend up to 85 percent ethanol. Vehicles that can run on E85 include models produced by GMC, Ford, DaimlerChrysler, Mazda, Mercury and Isuzu.

The National Ethanol Vehicle Coalition along with the Treasure Valley Clean Cities Coalition was helpful



**Idaho Governor Dirk Kempthorne fills up the tank of a new 2005 Chevrolet Suburban with E85 fuel at a Stinker Station in Boise. The alternative fuel, a blend of 85 percent ethanol, produced by grains and potatoes, is available for E85-compatible vehicles. (Photo courtesy of the Governor's office)**

in funding the installation of the fueling station in Boise. The pump is part of the E85 feasibility project, a partnership of public and private interests, including the Idaho Energy Division, and Idaho Departments of Environmental Quality, Agriculture, and Transportation.

Other participants include the city of Boise, Ada County Highway District, Boise State University, General Motors, the Idaho Farm Bureau, Idaho Grain Producers Association, and the Community Planning Association of Southwest Idaho (COMPASS).

# NEEA Recognizes Idaho Energy Advocates

Sue Seifert believes in energy conservation. She's been an advocate of saving energy since the Idaho Office of Energy was part of the governor's office.

In October, Seifert, a senior energy specialist with the Energy Division, was recognized for her efforts with a 2004 BetterBricks award. She is one of six recipients of the award in Idaho.



**Sue Seifert**

## Building performance

Seifert's efforts through the Energy Division influence several million square feet of building space in Idaho each year. For the past eight years she has written grants that provide funding for high performance building activities within many state facilities.

"Successful advocacy requires patience," says Seifert. "It takes time to educate building owners or facility managers to the point of developing a 'green' attitude. But once they incorporate green concepts, the payoff is big."

Seifert is involved with several programs that involve upgrading buildings to make them more efficient. She continues to educate building mechanical employees to help them understand how the building should operate efficiently.

Through her work with Rebuild Idaho, she has promoted energy planning and the hiring of energy managers in

many Idaho communities, schools, universities and public buildings.

Some of her accomplishments include Twin Falls School District, Idaho State University, and Council School District.

## Additional Idaho Awards

Bruce Poe, AIA, partner and principal architect of Cole + Poe Architects, P.A., was named an advocate finalist. As the first LEED (Leadership in Energy and Environmental Design) Accredited Professional in Idaho, Poe is committed to the green building industry.

**Architecture** – As a LEED accredited professional, Doug Cooper, AIA, with McKibben + Cooper Architects, has incorporated proper use of daylighting, integrated building systems, used recycled or sustainable materials and carefully considered site preparation.

**Developer** – Foad Roghani and Susan Camille Beckman Roghani are owners of Camille Beckman, a manufacturer of natural body and bath products. At their headquarters in Eagle, the Roghanis have created a workplace for their employees that is both comfortable and sustainable.

Plans for their new headquarters began by commissioning an energy study to explore the use of alternative energy. By integrating skylights and lighting controls and using onsite water resources for heating and cooling, the plant uses about 25 percent less energy than a traditional plant of similar size.

**Engineer** – Bob Tikker of Tikker Engineering in Boise has developed a load circulation program that uses climate, solar and building construction type to help designers select mechanical equipment that is properly sized.

As a LEED Accredited Professional, Tikker is involved in ASHRAE and the U.S. Green Building Council. He has been the lead design engineer on several LEED

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## Fuel Guide Available From Energy Division

Hybrid electric, flexible fuels, E85, biodiesel – all these new terms, and many more, to digest before shopping for a new vehicle. But help is just a phone call away.

By calling the Idaho Energy Hotline, 1-800-334-SAVE, you can receive your free copy of the 2005 Fuel Economy Guide, a non-bias booklet published by the U.S. Environmental Protection Agency, the U.S. Department of Energy and the Office of Energy Efficiency and Renewable Energy.

With so many styles of vehicles and types of fuel, consumers will find this handy 21-page booklet an excellent source of information to help select just the right vehicle.

The first four pages explain how to use the guide to get the most data. Within each section of the guide, vehicles are organized by class, and then listed by manufacturer and model.

Different characteristics, such as transmission type and engine size, are listed, and the most fuel-efficient automatic and manual vehicles per class are listed in green boldface type and highlighted with a gray bar.

Additional information includes estimated miles per gallon for each vehicle in city and highway driving. A legend at the bottom of each page helps translate abbreviations, such as types of fuel and kind of transmission.

Besides standard vehicles, the guide lists pickup trucks, vans, mini-vans and sport utility vehicles. Hybrid-electric and flexible-fuel vehicles are also listed on separate pages.

Although most dealerships provide this guide for customers, you can receive your free personal copy from the Idaho Energy Division by calling the Idaho Energy Hotline, **1-800-334-SAVE**, or emailing Linda Cawley at [linda.cawley@idwr.idaho.gov](mailto:linda.cawley@idwr.idaho.gov).

## Governor Appoints Energy Chief To NEEA Board

Longtime Energy Division Administrator, Robert Hoppie, now represents Idaho on the Northwest Energy Efficiency Alliance (NEEA) board.

NEEA is a non-profit corporation supported by electric utilities, public benefits administrators, state governments, public interest groups and energy efficiency industry representatives.

These entities work together to make affordable, energy-efficient products and services available in the marketplace.

### Energy leader

Hoppie has been involved with energy efficiency programs since 1980 at the Idaho Office of Energy through the governor's office. He was named Bureau Chief in 1983, when the IOE was re-assigned to the Idaho Department of Water Resources.



**Robert Hoppie**

With the reorganization of IDWR in 1992, Hoppie became administrator of the Energy Division. Gov. Dirk Kempthorne appointed him to the NEEA Board on Nov. 17. He succeeds Shirley Lindstrom, whose term recently expired.

"This is a good opportunity to continue representing Idaho's energy consumers on the board," says Hoppie. "I look forward to advocating energy savings and finding ways to bring the latest energy-efficient products and technology to Idaho."

Hoppie's term on the board will last three years.

## 'Energy Buzz' Debuts In Idaho Newspapers

There's a new buzz round town, but it's not the sound of bees. It's the sound of Energy Division staffers helping consumers save energy and ultimately save money and resources.

Beginning in January, several Idaho weekly newspapers are debuting the Energy Division's new monthly column, "Idaho Energy Buzz." A variety of energy-related topics will be covered, including new home construction, existing home retrofits, low-interest loans, appliances, lights, alternative fuels, and renewable resources.

"We're eager to help consumers learn as much as possible about saving energy and lower their energy bills," says Mike Keckler, public information officer for the Idaho Department of Water Resources.

"A lot of resources are available through the Energy Division, but people in outlying area aren't always aware of them," Keckler adds.

In the future, the column will also be available on the Energy Division's homepage, and *Idaho Currents* will provide links to the monthly topics.

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certified projects and has been involved in helping owners make the decision to obtain LEED certification.

**Professional Services** – Tim Hansen of Alloway Lighting in Boise, along with his staff, makes every effort to educate his customers and clients on energy-efficient lighting products and their long-term cost savings.

Hansen has also implemented an internal program for his sales staff, entitled "Energy Savings First," which details a specific energy-saving approach to customer contact through procurement.

## EnergyIdeas Clearinghouse

# Heat Pumps: Keep Warm in the Cold

By Craig Meredith, P.E.

Cold climate heat pumps, as their name implies, are heat pumps optimized for use in cold weather areas. These heat pumps borrow technology from commercial refrigeration systems to maximize efficiency. These heat pumps are capable of operating efficiently at outside temperatures far lower than standard heat pumps and approach geothermal efficiencies with a SEER rating of 16.

The difference comes from a combination of technologies blended together to enhance performance. First, they use zero-ozone-depleting R-410, a refrigerant that is more efficient than R-22 and has a higher heat transfer rate.

The compressor has two cylinders, two-stages of compression, and a two-speed motor. This allows the system to run under a variety of conditions to optimize performance for the conditions. An additional backup booster compressor operates when the outside conditions are between 15°-35°F. An economizer is then added to allow it to work below 15°F.

Finally, an intelligent control system senses the outside and inside temperatures to determine the best operation mode for peak efficiencies. All of this comes together to make a high-efficiency heat pump for cold climates.

**About the author:** Craig Meredith, PE, is an Energy Engineer with 17 years experience in conservation, analysis, and industrial machine design. He works for the Riverbend Group and the EnergyIdeas Clearinghouse, and lives in Post Falls, Idaho.

**Editor's note:** The above article is the first in a series of columns submitted by the EnergyIdeas Clearinghouse, an energy information service that provides engineering assistance and library research to businesses in the Northwest. It is operated by the Washington State University Extension Energy Program and sponsored by the Northwest Energy Efficiency Alliance.